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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/579,360

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Thoi H Ho

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The Dow Chemical Company
Intellectual Property Section
P.O. Box 1967
Midland, MI 48641-1967

EXAMINER

KASHNIKOW, ERIK

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/579,360	Applicant(s) HO ET AL.	
	Examiner ERIK KASHNIKOW	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4,5,8-11 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4,5,8-11 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1, 2, 4, 5, 8-11 and 13 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. While Applicant's do reference the WIPO publication in their specification the reference is not incorporated therein and as such the interpolymers are not supported, and as such is new matter. Further, it is noted that incorporation by reference of essential subject matter to a foreign patent is improper (See MPEP 608.01(p)1A(2)).

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically these claims are rejected because in their current format they depend upon a rejected claim.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 4, 8-11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schramm et al. (WO 2003/020821) in view of Saxton (US 5,032,632).

3. In regards to claims 1 and 9 Schramm et al. teach pipes formed from an interpolymers of an ethylene alpha olefin which has a density between 0.925 and 0.95 g/ccm and a melt flow index of 0.05-5.0 g/10min (page 2 lines 25- page 3 line 2 and page 4 lines 7-15). Schramm et al. further teach that the pipe composition comprise an antioxidant additive (page 12 lines 1-5).

4. In regards to claim 2 Schramm et al. teach that the ethylene alpha olefin interpolymers may be multimodal (page 12 lines 16-20).

5. As stated above Schramm et al. teach a pipe with an antioxidant added however they are silent regarding the make up of the antioxidant and the inclusion of metal deactivators and phosphorus based stabilizers.

6. Saxton teaches pipes which exhibit improved resistance to oxidative and thermal degradation as well as to gelation (column 1 lines 6-9 and 5 lines 47-53).

7. In regards to claim 1 Saxton teaches that the polymer pipe comprise a hindered phenolic antioxidant (hereinafter HPA) (column 3 lines 17-18) Saxton further teaches

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that one or more of the HPA can be used(column 4 lines 1-2), and gives examples of applicants first class, such as 1,3,5-trimethyl-2-4,6-tris(3,5-t-butyl-4-hydroxybenzyl)benzene (Ethanox® 330) as well as Applicant's second group of HPA, such as tetrakis(methylene(3,5-di-t-butyl-4-hydroxyhydrocinnamate)methane (Irganox 1010)(column 4 lines 7-10). Saxton further teaches that the film is suitable for use as a pipe (column 5 line 51).

8. In regards to claim 2 since the reference is using the same HPA as Applicant's then the physical, chemical and mechanical properties of the HPA are intrinsically the same.

9. In regards to claim 4 Ethanox® 330 which was discussed above is equivalent to Irganox 1330, and Irganox® 1010 is also discussed as an antioxidant capable of use in the invention of Saxton.

10. In regards to claim 10 metal deactivators are metal containing chemical compounds used to stabilize liquids and to retard the formation of gummy residue, as such Saxton teaches using metal compounds as stabilizers (column 4 lines 19-64) as well as the overall compound being resistant to gel formation and specifically mentions using Irganox® 1024 (column 6 line 56).

11. In regards to claim 11 Saxton teaches the use of calcium bis(monoethyl(3,5-di-t-butyl-4-hydroxybenzyl)phosphonate as a possible stabilizer/antioxidant (column 6 lines 58-59).

12. In regards to claims 1 and 13 since Schramm et al. and Saxton et al. teach all aspects of Applicant's claim then the rest of the claimed properties would be intrinsic.

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13. One of ordinary skill in the art at the time of the invention would be motivated to modify the pipe of Schramm et al. with that of Saxton et al. because the pipe of Saxton et al. offers improved resistance to oxidative and thermal degradation (column 1 lines 6-9).

14. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schramm et al. (WIPO 2003/020821) in view of Saxton (US 5,302,632) and Takahashi et al (US 6,329,465)

15. As stated above Schramm et al. and Saxton teach a pipe suitable for transporting potable water. However they are silent about the polyethylene interpolymer of the pipe containing Irgafos 168 as phosphorus based stabilizer.

16. Takahashi et al. teach ethylene copolymer compositions used to make molded products including pipes (column 32 line 56 to column 33 line 4).

17. In regards to claim 5 Takahashi et al. teach that it is known in the art to use Irgafos® 168 with Irganox® compounds, such as Irganox® 1010 (column 53 lines 11-20).

18. One of ordinary skill in the art at the time of the invention would be motivated to modify the pipe of Schramm et al. and Saxton with the films of Takahashi et al. because the films of Takahashi et al. would offer excellent mechanical strength to the pipes of Schramm et al. and Saxton which have improved resistance to oxidation, and thermal degradation as well as a decrease in brittle failure at increased temperatures as discussed above.

Response to Arguments

19. Applicant's arguments, see arguments, filed 10/15/08, with respect to the 35 U.S.C. 112 and 101 rejections have been fully considered and are persuasive. The 101 and 112 rejections of the claims have been withdrawn.

20. In response to Applicant's arguments regarding the ethylene alpha olefin interpolymers, Examiner agrees that the Saxton is silent regarding pipes made of ethylene alpha olefin interpolymers, however that is why the Schramm reference is now used in the rejection. In regards to the Saxton reference teaching away from the claimed invention because it teaches pipes made of EVOH, examiner points out that Saxton is now a teaching reference and is being used to teach antioxidant systems known to be incorporated into polymeric pipes. Examiner notes that while Saxton does not disclose all the features of the present claimed invention, Saxton is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nieveelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, and in combination with the primary reference, discloses the presently claimed invention. If the secondary reference contained all the features of the present claimed invention, it would be identical to the present claimed invention, and there would be no need for secondary references.

21. In response to Applicant's arguments that Saxton is silent regarding an antioxidant system that consists essentially of the two classes of antioxidants presently claimed Examiner points out that it is the stabilizer composition of Saxton that comprises two components, and further the antioxidant system of Saxton, which is a component of the stabilizer composition consists of HPA. Examiner further points out that as the HPA taught by Saxton for the first antioxidant component is the same as Applicant's it would intrinsically be soluble in Hexane.

22. In regards to Applicant's arguments regarding the Takahashi reference Examiner points out that the Takahashi reference is used to teach that Irgafos™ 168 is a hindered phenol useful as an antioxidant in polymeric systems, and is not used to teach multi hindered phenol antioxidant systems. Examiner notes that while Takahashi does not disclose all the features of the present claimed invention, Takahashi is used as teaching reference, and therefore, it is not necessary for this secondary reference to contain all the features of the presently claimed invention, *In re Nievelt*, 482 F.2d 965, 179 USPQ 224, 226 (CCPA 1973), *In re Keller* 624 F.2d 413, 208 USPQ 871, 881 (CCPA 1981). Rather this reference teaches a certain concept, and in combination with the primary reference, discloses the presently claimed invention. If the secondary reference contained all the features of the present claimed invention, it would be identical to the present claimed invention, and there would be no need for secondary references.

23. In regards to Applicant's arguments concerning the fact that the references are silent regarding the F-time in Jana Laboratories Procedure APTF-2, Examiner points out that the office action states that as all materials of the present invention are present in

the ranges claimed, than this and other physical, mechanical and chemical properties of the invention would intrinsically be the same.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Katoh et al. (US 5,266,363) teach ethylene alpha olefin interpolymers useful in the formation of pipes.

24. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIK KASHNIKOW whose telephone number is

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(571)270-3475. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST (First Friday off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Callie Shosho can be reached on (571) 272-1123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Erik Kashnikow
Examiner
Art Unit 1794

/Callie E. Shosho/
Supervisory Patent Examiner, Art Unit 1794

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